

September 21, 2018

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, DC 20554

Re: **Notice of *Ex Parte* Presentation, Amendment of the Commission's Rules Related to Earth Stations in Motion Communicating with Geostationary Orbit Satellites**
IB Docket No. 17-95

Dear Ms. Dortch:

On September 19, 2018, Suzanne Malloy, Will Lewis, Noah Cherry and Zachary Rosenbaum of SES Americom, Inc. and its affiliate, O3b Limited (collectively, "SES") spoke separately by telephone with Rachael Bender, Legal Advisor to Chairman Pai, Erin McGrath, Legal Advisor to Commissioner O'Rielly, and Will Adams, Legal Advisor to Commissioner Carr to discuss the draft Order and Further Notice of Proposed Rulemaking in the above referenced proceeding (respectively, "Order" and "FNPRM").¹

SES respectfully requested that the Commission amend the FNPRM to seek comment on proposed rules for earth stations in motion ("ESIMs") communicating with non-geostationary orbit ("NGSO") constellations, specifically in the Ka-band. This would enable the Commission further to develop the record on NGSO ESIMs without delay, providing greater certainty for NGSO operators and promoting international spectrum harmonization.

The record supports the Commission's adoption of rules for ESIMs that communicate with NGSO constellations. SES submitted ample evidence in its filings that NGSO ESIMs are fully compatible with geostationary orbit ("GSO") satellite operations, including GSO ESIMs.² No commenter raised specific concerns regarding SES's proposal to propose rules

¹ *Amendment of the Commission's Rules Related to Earth Stations in Motion Communicating with Geostationary Orbit Satellites*, Draft Report and Order and Further Notice of Proposed Rulemaking, IB Docket No. 17-95, FCC-CIRC1809-08 (rel. Sept. 5, 2018).

² See Comments of SES Americom, Inc. and O3b Limited, IB Docket No. 17-95 (filed July 31, 2017). SES's draft proposed rules as presented in its comments are attached as an Annex to this filing; Reply Comments of SES Americom, Inc. and O3b Limited, IB Docket No. 17-95 (filed Aug. 30, 2017).

for facilitating operations and continued deployment of NGSO ESIMs. Indeed, Telesat supported SES's proposal to, at a minimum, adopt rules for NGSO ESIMs in the NGSO-primary Ka-band frequencies, and Boeing concurred with SES "that a Further Notice should be adopted in this proceeding to adopt rules and authorize the operation of ESIMs with [NGSO] constellations."³ SES believes that the record is sufficient to develop a set of questions seeking comment on NGSO ESIMs, even if it simply seeks comment on SES's proposals.

More immediate action authorizing NGSO ESIMs would provide certainty for NGSO ESIMs already operating in the United States and would promote global spectrum harmonization. Certainty for the NGSO ESIM market is critical for promoting and sustaining investment in NGSO satellite systems. In turn, growth in NGSO connectivity to mobility platforms such as aircraft and vessels fuels NGSO growth overall. Because of the global nature of NGSO satellite constellations, any increase in investment in NGSO satellite systems resulting from demand for ESIM connectivity results in additional NGSO satellite capacity across the entire globe. Some of this additional capacity could be made available for responding to natural disasters and fiber cuts, as well as for services in rural areas.

For example, SES's NGSO FSS capacity in place for maritime ESIM customers on the East Coast of the United States and in the Caribbean was well-positioned and readily available when additional capacity was needed to provide connectivity services in Puerto Rico after Hurricane Maria. This capacity enabled the Alphabet Loon balloons to restore mobile services and provided restoration services after overwhelming hurricane damage to terrestrial communications infrastructure.

At the very least, the Commission should commit in the FNPRM to issuing a separate Notice of Proposed Rulemaking proposing rules for NGSO ESIMs. Unnecessary delay and uncertainty will undermine the U.S.'s global leadership on spectrum issues and impede the full development of the ESIM market.

A copy of this letter has been submitted to the relevant proceedings pursuant to 47 C.F.R. §§ 1.1200 *et seq.* Please direct any questions regarding this notification to the undersigned.

Respectfully submitted,

/s/ Suzanne Malloy
Suzanne Malloy

³ Reply Comments of Telesat Canada, IB Docket No. 17-95, at 3-4 (filed Aug. 30, 2017); Reply Comments of Boeing, IB Docket No. 17-95, at 1-2 (filed Aug. 30, 2017).

Vice President, Regulatory Affairs
O3b Limited
900 17th Street, NW Suite 300
Washington, D.C. 20006
(202) 813-4026

cc: Rachael Bender (via email)
Erin McGrath (via email)
Will Adams (via email)

ANNEX 1: Proposed Rule Revisions

This annex contains suggested rule revisions to implement some of the policy changes discussed in the foregoing comments of SES and O3b. The SES and O3b proposals for alteration of the rules currently in effect or proposed in Appendix A of the Notice are marked in red.

1. Changes to the Table of Allocations:

Revise footnote NG52 as follows:

NG52 Except as otherwise provided for herein, use of the bands 10.7-11.7 GHz (space-to-Earth) and 12.75-13.25 GHz (Earth-to-space) by geostationary satellites in the fixed-satellite service (FSS) shall be limited to international systems, i.e., other than domestic systems. In the ~~sub-bands 10.95-11.2 GHz and 11.45~~ 10.7-11.7 GHz ~~band~~, Earth Stations in Motion (ESIMs), as regulated under 47 CFR part 25, may be authorized for the reception of FSS emissions from geostationary satellites, subject to the condition that these earth stations shall not claim protection from transmissions of non-Federal stations in the fixed service.

Add new footnote NGxx as follows and add a reference to the footnote in the Non-Federal column of the United States Table, in the rows relating to the 18.8-19.3 GHz and 28.6-29.1 GHz bands:

NGxx In the bands 18.8-19.3 GHz (space-to-Earth), and 28.6-29.1 GHz (Earth-to-space), Earth Stations in Motion (ESIMs), as regulated under 47 CFR part 25, are applications of the fixed-satellite service and may be authorized to communicate with non-geostationary satellites in the fixed-satellite service on a primary basis.

Add new footnote NGyy as follows and add a reference to the footnote in the Non-Federal column of the United States Table, in the row relating to the 17.8-18.3 GHz band:

NGyy In the 17.8-18.3 GHz band, Earth Stations in Motion (ESIMs), as regulated under 47 CFR part 25, may be authorized for the reception of FSS emissions from geostationary and non-geostationary satellites, subject to the condition that these earth stations shall not claim protection from transmissions of non-Federal stations in the fixed service.

2. Changes to Section 25.103:

Revise the definitions of Earth Station on Vessel, Earth Stations aboard Aircraft, and Vehicle-Mounted Earth Station, as shown below.

Earth Station on Vessel (ESV). An earth station onboard a craft designed for traveling on water, receiving from and transmitting to geostationary-orbit ~~or non-geostationary-orbit~~ Fixed-Satellite Service space stations.

Earth Station Aboard Aircraft (ESAA). An earth station operating aboard an aircraft that receives from and transmits to geostationary-orbit ~~or non-geostationary-orbit~~ Fixed-Satellite Service space stations.

Vehicle-Mounted Earth Station (VMES). An earth station, operating from a motorized vehicle that travels primarily on land, that receives from and transmits to geostationary orbit ~~or non-geostationary-orbit~~ Fixed-Satellite Service space stations and operates within the United States.

3. Changes to Section 25.202(a):

§25.202 Frequencies, frequency tolerance, and emission limits.

(a) * * *

(a)(8) The following frequencies are available for use by ESVs:

3700-4200 MHz (space-to-Earth)

5925-6425 MHz (Earth-to-space)

~~10.95-11.2 GHz (space-to-Earth)~~

~~11.45~~10.7-11.7 GHz (space-to-Earth)

11.7-12.2 GHz (space-to-Earth)

14.0-14.5 GHz (Earth-to-space)

~~17.8-18.3 GHz (space-to-Earth)~~

18.3-18.8 GHz (space-to-Earth)

~~18.8-19.3 GHz (space-to-Earth)~~

19.7-20.2 GHz (space-to-Earth)

28.35-28.6 GHz (Earth-to-space)

~~28.6-29.1 GHz (Earth-to-space)~~

29.25-30.0 GHz (Earth-to-space)

(a)(10) The following frequencies are available for use by Vehicle-Mounted Earth Stations (VMESs):

~~10.95-11.2 GHz (space-to-Earth)~~

~~11.45~~10.7-11.7 GHz (space-to-Earth)

11.7-12.2 GHz (space-to-Earth)

14.0-14.5 GHz (Earth-to-space)

~~17.8-18.3 GHz (space-to-Earth)~~

18.3-18.8 GHz (space-to-Earth)

~~18.8-19.3 GHz (space-to-Earth)~~

19.7-20.2 GHz (space-to-Earth)

28.35-28.6 GHz (Earth-to-space)

~~28.6-29.1 GHz (Earth-to-space)~~

29.25-30.0 GHz (Earth-to-space)

(a)(11) The following frequencies are available for use by Earth Stations Aboard Aircraft (ESAAs):

~~10.95-11.2 GHz (space-to-Earth)~~

~~11.45~~10.7-11.7 GHz (space-to-Earth)

11.7-12.2 GHz (space-to-Earth)

14.0-14.5 GHz (Earth-to-space)

~~17.8-18.3 GHz (space-to-Earth)~~

18.3-18.8 GHz (space-to-Earth)

~~18.8-19.3 GHz (space-to-Earth)~~

19.7-20.2 GHz (space-to-Earth)

28.35-28.6 GHz (Earth-to-space)

~~28.6-29.1 GHz (Earth-to-space)~~

29.25-30.0 GHz (Earth-to-space)